

**Amendments to the Claims:**

This listing of the claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

**1-46 (Cancelled).**

**47 (Currently Amended).** A method of collecting information relating to a communication network and to substantially all nodes operating in said communication network, the method comprising:

~~detecting enabling detection, substantially in real-time, of~~ data conveyed by one or more detected nodes operating in the communication network in a manner that is transparent to said one or more detected nodes, ~~giving rise to the yield~~ detected data, thereby ~~detecting enabling detection of~~ said data passively;

analyzing said detected data and data relating to said communication network to identify for identifying at least one of identified information and missing information:

said data relating to said communication network comprising node identification data;

said identified information comprising at least one of nodal information relating to the one or more detected nodes; nodes and nodal information relating to said communication network; and

said missing information comprising at least one of missing  
information regarding at least one of said one or more detected nodes;~~and~~ and  
missing information regarding said communication network; and  
storing at least a part of the identified information on a storage device  
comprising a computer readable medium accessible thereto;

if said missing information is identified, then querying at least one of one  
or more nodes operating in said communication network for said missing information  
provided at least partially from said storage device, ~~giving rise to~~ yield the queried  
nodes, thereby ~~collecting~~ enabling collection of said missing information actively.

**48 (Cancelled).**

**49 (Previously Presented).** The method of Claim 47, wherein the nodal  
information comprises operating system information relating to operating systems  
operating on the one or more nodes.

**50 (Previously Presented).** The method of Claim 49, wherein the nodes  
are included in at least one of the following: detected nodes and queried nodes.

**51 (Previously Presented).** The method of Claim 49, wherein the  
detection of the data comprises detecting at least one type of message from a group  
comprising DHCP (Dynamic Host Configuration Protocol) messages and SYN packets.

**52 (Currently Amended).** The method of Claim 49, wherein the analyzing  
further comprises:

receiving data corresponding to data conveyed by a detected node, giving  
rise to yield the received data;

inspecting said received data for one or more characteristics of a known operating system; and

if inspecting of said received data reveals that the data conforms with said one or more characteristics, indicating that the known operating system operates on the detected node.

**53 (Previously Presented).** The method of Claim 47, wherein the nodal information comprises runtime information relating to running processes.

**54 (Previously Presented).** The method of Claim 53, wherein the runtime information relating to running processes comprises at least one of the following: information relating to network running processes operating on the detected nodes; and information relating to local running processes operating on the detected nodes.

**55 (Previously Presented).** The method of Claim 47, wherein the nodal information comprises hardware information relating to hardware components associated with the respective detected nodes.

**56 (Previously Presented).** The method of Claim 47, wherein the nodal information comprises topology information relating to physical topology of the communication network.

**57 (Previously Presented).** The method of Claim 47, wherein the querying further comprises:

generating a query message corresponding to the missing information for conveying said query message to one or more nodes to be queried;

conveying the query message to said one or more nodes, giving rise to the queried nodes.

**58 (Previously Presented).** The method of Claim 57, wherein the querying further comprises:

receiving at least one response that corresponds to the query message;  
and

processing the at least one response to retrieve information corresponding to the missing information.

**59 (Previously Presented).** The method of Claim 57, wherein the query message is one of the following: an ARP (Address Resolution Protocol) request; an ICMP (Internet Control Message Protocol) echo request; and a TCP-SYN request.

**60 (Previously Presented).** The method of Claim 57, wherein the generating is done in accordance with a test policy, and  
wherein the test policy is selected from a group of available test policies.

**61 (Previously Presented).** The method of Claim 57, wherein the generating is done in accordance with a test policy, and  
wherein the test policy is selected in accordance with a statistical computation.

**62 (Previously Presented).** The method of Claim 57, wherein said missing information relates to at least one running process operating on respective queried nodes.

**63 (Previously Presented).** The method of Claim 57, wherein the detected nodes comprises at least one queried node, and the data conveyed by detected nodes includes at least one response that corresponds to the query message.

**64 (Currently Amended).** A network information collector configured to collect information relating to a communication network and to substantially all nodes operating in said communication network, the network information collector comprising:

a network detector configured to ~~detect~~enable detecting, ~~substantially in real-time~~, data conveyed by one or more detected nodes operating in the communication network in a manner that is transparent to the one or more detected nodes, ~~giving rise to~~ yield the detected data, thereby ~~detecting~~ enabling detection of said data passively;

an analyzer configured to analyze said detected data and data relating to said communication network for identifying ~~to identify at least one of identified information and missing information~~:

said data relating to said communication network comprising node identification data;

said identified information comprising at least one of nodal information relating to said one or more detected nodes; nodes and nodal information relating to said communication network;

said missing information comprising at least one of missing information regarding at least one of said one or more detected nodes; and and missing information regarding said communication network; and

a query engine ~~configure~~configured to query at least one of one or more nodes operating in said communication network for said missing information, if said missing information is identified, giving rise to yield the queried nodes, thereby ~~collecting~~enabling collection of said missing information actively.

**65 (Cancelled).**

**66 (Previously Presented).** The network information collector of Claim 64, wherein the analyzer is configured to analyze nodal information that includes operating system information relating to operating systems operating on the one or more detected nodes.

**67 (Previously Presented).** The network information collector of Claim 66, wherein the detection of the data conveyed by the one or more detected nodes comprises detecting at least one type of message from a group comprising DHCP (Dynamic Host Configuration Protocol) messages; and SYN packets.

**68 (Currently Amended).** The network information collector of Claim 66, wherein the analyzer further comprises:

an input device configured to receive data, giving rise to the ~~detected~~ received data, said received data corresponds to data conveyed by a detected node;

a data inspector coupled to said input device, the data inspector being configured to inspect said received data for one or more characteristics of a known operating system; and

a data marker coupled to said data inspector and being responsive thereto, the data marker being configured to indicate that the known operating system operates on the detected node.

**69 (Previously Presented).** The network information collector of Claim 64, wherein the analyzer is configured to analyze nodal information that comprises runtime information relating to running processes.

**70 (Previously Presented).** The network information collector of Claim 64, wherein the query engine includes:

a query message generator configured to generate a query message corresponding to the missing information for conveying said query message to nodes to be queried; and

an output device configured to convey the query message to the nodes to be queried, giving rise to the queried nodes.

**71 (Previously Presented).** The network information collector of Claim 70, wherein the query engine further includes:

an input device configured to receive at least one response that corresponds to the query message; and

a response processor configured to process said at least one response to retrieve information corresponding to the missing information.

**72 (Currently Amended).** A non-transitory program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method of collecting information relating to a communication

network and to substantially all nodes operating in said communication network, the method comprising:

~~detecting~~enabling detection, substantially in real-time, of data conveyed by one or more detected nodes operating in the communication network in a manner that is transparent to said one or more detected nodes, ~~giving rise to the~~to yield detected data, thereby ~~detecting~~enabling detection of said data passively;

analyzing said detected data and data relating to said communication network for identifying at least one of identified information and missing information:

said data relating to said communication network comprising node identification data;

said identified information comprising at least one of nodal information relating to said one or more detected ~~nodes~~nodes and nodal information relating to said communication network;

said missing information comprising at least one of missing information regarding at least one of said one or more detected nodes;~~and~~ and missing information regarding said communication network; and

if said missing information is identified, then querying at least one of one or more nodes operating in said communication network for said missing information, ~~giving rise to~~yield the queried nodes, thereby ~~collecting~~enabling collection of said missing information actively.

**73 (Currently Amended).** A computer program product comprising a non-transitory computer useable medium having computer readable program code



embodied therein for collecting information relating to a communication network and to substantially all nodes operating in said communication network, the computer program product comprising:

computer readable program code for ~~causing~~enabling the computer to detect~~, substantially in real-time,~~ data conveyed by one or more detected nodes operating in the communication network in a manner that is transparent to said one or more detected nodes, ~~giving rise to~~ yield the detected data, thereby ~~detecting~~enabling detection of said data passively;

computer readable program code for causing the computer to analyze said detected data and data relating to said communication network for identifying at least one of the identified information and missing information:

said data relating to said communication network comprising node identification data;

said identified information comprising at least one of nodal information relating to said one or more detected ~~nodes;~~nodes and nodal information relating to said communication network;

said missing information comprising at least one of missing information regarding at least one of said one or more detected ~~nodes;~~nodes and missing information regarding said communication network; and

computer readable program code for causing the computer to query at least one of one or more nodes operating in said communication network for the missing information, if said missing information is identified, giving rise to yield the

queried nodes, thereby ~~collecting~~ enabling collection of said missing information actively.

74. **(New)** The method of Claim 47, wherein the step of enabling detection is performed in real-time.

75. **(New)** The method of Claim 64, wherein the network detector is to enable detection in real-time.